

## AMENDMENTS TO THE CLAIMS

### 1-55. (Previously Canceled)

56. (Currently Amended) A method of managing access to network resources, the method being performed by a network management system in communication with a portable communication device via a network, the method comprising:

receiving, at a communications port of a network management system from a portable communication device via a network, a first request to access a network resource located at an external server, the first request comprising one or more network packets, ~~which include header and body data, and being configured with attributes including a source address, a checksum, and a port number, wherein the checksum is calculated based at least in part on header and body data of one or more network packets~~ configured with network settings that do not correspond to the network;

determining, using a processor, whether to provide the portable communication device with access to the network resource, the determination being based at least in part on comparing ~~one or more of the attributes~~ an attribute included in the first request to a user profile database; and

upon determining that the portable communication device is not to be provided with access to the network resource, redirecting the portable communication device to an authentication system, by:

receiving, from the redirection server, redirection data comprising resource identification data that identifies the authentication system, the redirection data configured to cause the portable communication device to be redirected to the authentication system; and

sending, from the communications port of the network management system to the portable communication device, a browser redirect message based upon the redirection data, the browser redirect message configured to indicate that it was sent by the network resource ~~and comprises attributes in which at least one of a source address, a~~

~~checksum, and a port number differs from those attributes of the first request;~~

whereby the portable communication device is enabled, by being redirected to the authentication system, to provide authentication-related information so that the portable communication system may be provided access to the network resource.

57. **(Previously Presented)** The method of Claim 56, further comprising updating the user profile database upon determining that the portable communication device is to be provided with access to the network resource.

58. **(Previously Presented)** The method of Claim 56, further comprising maintaining in the user profile database a historical log of the portable communication device's access to the network resource.

59. **(Previously Presented)** The method of Claim 56, wherein the first request is an HTTP request.

60. **(Previously Presented)** The method of Claim 56, wherein determining whether to provide the portable communication device with access to the network resource further comprises denying the portable communication device access where the user profile database indicates that the portable communication device may not access the network resource.

61. **(Previously Presented)** The method of Claim 56, wherein the determination of whether to provide the portable communication device with access to the requested network is based at least in part on one of a port, circuit ID, VLAN ID or MAC address.

62. **(Previously Presented)** The method of Claim 56, further comprising:  
receiving, from the portable communication device, a second request to access a second network resource; and  
determining that the portable communication device is authorized to access the second network resource, based at least upon a MAC address included in the second request.

63. **(Currently Amended)** A network management system configured to manage access to a network resource, the system comprising:

a network communications interface configured to receive, from a portable communication device via a network, a first request to access a network resource located external to the network management system, the first request comprising a resource locator that identifies the network resource, the first request being configured with ~~attributes including a source address, a checksum, and a port number, wherein the checksum allows for verifying correct data transmission, network settings that do not correspond to the network;~~ and

a processor configured to determine whether to allow the portable communication device to access the network resource, the determination being based at least in part on comparing one or more ~~of the~~ attributes included in the first request to a user profile database;

the processor further configured to redirect the portable communication device to an authentication system, upon determining not to allow the portable communication device to access the network resource, by:

receiving, from the redirection server, redirection data comprising resource identification data that identifies the authentication system, the redirection data configured to cause the portable communication device to be redirected to the authentication system; and

sending, to the portable communication device, a browser redirect message based upon the redirection data, the browser redirect message indicating it originated from the network resource ~~and comprises attributes in which at least one of a source address, a checksum, and a port number differs from those attributes of the first request;~~

whereby the portable communication device is enabled, by being redirected to the authentication system, to submit authentication-related information so that the portable communication system may be allowed to access the network resource.

64. **(Previously Presented)** The network management system of Claim 63, wherein the processor is further configured to maintain, in the user profile database, a historical log of the portable communication device's access to the network resource.

65. **(Previously Presented)** The network management system of Claim 63, wherein the first request is an HTTP request.

66. **(Previously Presented)** The network management system of Claim 63, wherein determining whether to allow the portable communication device to access the network resource further comprises denying the portable communication device access where the user profile database indicates that the portable communication device may not access the network resource.

67. **(Previously Presented)** The network management system of Claim 63, wherein the determination of whether to allow the portable communication device to access the network resource is based at least in part on one of a port, circuit ID, VLAN ID or MAC address.

68. **(Previously Presented)** The network management system of Claim 63, wherein the network interface is further configured to receive, from the portable communication device, a second request to access a second network resource, and wherein the processor is further configured to determine that the portable communication device is authorized to access the second network resource, based at least upon a MAC address included in the second request.

69. **(Previously Presented)** The network management system of Claim 63, wherein the user profile database further stores information relating to a time period associated with the portable communication device, and wherein the determination of whether to allow the portable communication device to access the network resource is further based on an amount of time that has elapsed in relation to the time period stored in the user profile database.

70. **(Previously Presented)** The network management system of Claim 63, wherein the attribute included in the first request comprises a link-layer header of a network packet, and wherein the determination of whether to allow the portable communication device to access the network resource is based both on the link-layer

**Application No.:** 09/458,602  
**Filing Date:** December 8, 1999

header of the network packet and on identification information provided automatically by a browser of the portable communication device.

71-76. **(Previously Canceled)**

77. **(Currently Amended)** A method of accessing a network resource by a portable communication device, the method performed by a network management system in communication with the portable communication device, the method comprising:

receiving, at a communications port of a network management system from a portable communication device, a first request to access a network resource, the first request comprising one or more network packets, ~~the first request further comprising attributes including a source address, a checksum, and a port number, wherein the checksum allows for verifying correct data transmission;~~

determining, using one or more processors, whether to provide the portable communication device with access to the network resource, the determination being based at least in part on comparing one or more of the attributes included in the first request to a user profile database;

receiving, from a redirection server, redirection data comprising resource identification data that identifies an authentication system, the redirection data configured to cause the portable communication device to be redirected to the authentication system; and

sending, from the communications port of the network management system to the portable communication device, a browser redirect message based upon the redirection data, the browser redirect message configured to indicate that it was sent by the network resource, the browser redirect message being sent upon a determination not to provide the portable communication device with access to the network resource, ~~the browser redirect message comprising attributes in which at least one of a source address, a checksum, and a port number differs from those attributes of the first request;~~

whereby the portable communication device is enabled, by being redirected to the authentication system, to transmit authentication-related information so that the portable communication system may be provided access to the network resource.

78. **(Previously Presented)** The method of Claim 77, further comprising updating the user profile database upon determining to provide the portable communication device with access to the network resource.

79. **(Previously Presented)** The method of Claim 77, further comprising maintaining in the user profile database a historical log of the portable communication device's access to the network resource.

80. **(Previously Presented)** The method of Claim 77, wherein the first request is an HTTP request.

81. **(Previously Presented)** The method of Claim 77, wherein determining whether to provide the portable communication device with access to the network resource further comprises denying the portable communication device access where the user profile database indicates that the portable communication device may not access the network resource.

82. **(Previously Presented)** The method of Claim 77, wherein the determination of whether to provide the portable communication device with access to the network resource is one of a port, circuit ID, VLAN ID or MAC address.

83. **(Previously Presented)** The method of Claim 77, further comprising:  
receiving, from the portable communication device, a second request to access a second network resource; and

determining to provide the portable communication device with access to the second network resource, based at least upon a MAC address included in the second request.

84-86. **(Previously Canceled)**

87. **(Currently Amended)** A network management system configured to manage access of a portable communication device to a network resource, the system comprising:

a network communications interface configured to receive, from a portable communication device, a first request to access a network resource, the request comprising one or more network packets, ~~the first request further comprising a source address, a checksum allowing for verification of correct data transmission, a port number, and a resource locator that identifies the network resource;~~ and

one or more processors configured to determine whether to allow the portable communication device to access the network resource, the determination being based at least in part on comparing an attribute included in the first request to a user profile database;

the one or more processors further configured to redirect the portable communication device to an authentication system, by performing a method operations comprising:

receiving, from a redirection server, redirection data comprising resource identification data that identifies the authentication system, the redirection data configured to cause the portable communication device to be redirected to the authentication system; and

sending, from the network communications interface of the network management system to the portable communication device, a browser redirect message based upon the redirection data, the browser redirect message indicating it originated from the network resource, the browser redirect message being sent as a result of the determination not to allow the portable communication device to access the network resource, ~~the browser redirect message having at least one of a source address, a checksum, and a port number that differs from those attributes of the first request;~~

whereby the portable communication device is enabled, by being redirected to the authentication system, to transmit authentication-related



information so that the portable communication system may be allowed to access the network resource.

88. **(Previously Presented)** The network management system of Claim 87, wherein the processor is further configured to maintain, in the user profile database, a historical log of the portable communication device's access to the network resource.

89. **(Previously Presented)** The network management system of Claim 87, wherein the first request is an HTTP request.

90. **(Previously Presented)** The network management system of Claim 87, wherein determining whether to allow the portable communication device to access the network resource further comprises denying the portable communication device access where the user profile database indicates that the portable communication device may not access the network resource.

91. **(Previously Presented)** The network management system of Claim 87, wherein the determination of whether to allow the portable communication device to access the network resource is based at least in part on one of a port, circuit ID, VLAN ID or MAC address.

92. **(Previously Presented)** The network management system of Claim 87, wherein the network interface is further configured to receive, from the portable communication device, a second request to access a second network resource, and wherein the processor is further configured to determine that the portable communication device is allowed to access the second network resource, based at least upon a MAC address included in the second request.

93. **(Previously Presented)** The system of Claim 87, wherein the user profile database further stores information relating to a time period associated with the portable communication device, and wherein the determination of whether the portable communication device is allowed to access the network resource is further based on an amount of time that has elapsed in relation to the time period stored in the user profile database.

94. **(Previously Presented)** The system of Claim 87, wherein the first request comprises a link-layer header of a network packet, and wherein the determination of whether the portable communication device is allowed to access the network resource

is based both on the link-layer header of the network packet and on identification information provided automatically by a browser of the portable communication device.

95. **(Previously Canceled)**

96. **(Previously Presented)** The system of Claim 87, wherein the first request comprises a TCP packet to open a connection.

97. **(Previously Canceled)**

98. **(Previously Presented)** The system of Claim 87, wherein the one or more processors are further configured to store the first request to access the network resource.

99. **(Previously Presented)** The system of Claim 87, wherein the portable communication device communicates with the network communications interface via a network.

100. **(Previously Presented)** The method of Claim 77, further comprising storing the request to access the network resource.

101. **(Previously Presented)** The method of Claim 77, wherein receiving, from a portable communication device, a first request to access a network resource comprises receiving, from a portable communication device via a network, a request to access a network resource.

102. **(Previously Presented)** The method of Claim 56, wherein the portable communication device is redirected to the authentication system by further storing the request to access the network resource.

103. **(Previously Presented)** The method of Claim 56, wherein the portable communication device is redirected to the authentication system by further communicating request data to the redirection server, the request data being based on the first request.

104. **(Previously Presented)** The method of Claim 56, wherein determining whether to provide the portable communication device with access to the network resource comprises determining whether the portable communication device is authorized to access the requested network resource.

105. **(Previously Presented)** The method of Claim 56, wherein the first request is configured with network settings that do not correspond to the network.

106. **(Previously Presented)** The method of Claim 56, further comprising storing the first request to access a network resource.

107. **(Previously Presented)** The method of Claim 56, further comprising communicating a modified request to a redirection server, the modified request being based upon the first request to access the network resource.

108. **(Previously Presented)** The method of Claim 56, wherein the redirection data comprises a browser redirect message.

109. **(Previously Presented)** The method of Claim 56, wherein the method is performed by single device.

110. **(Previously Presented)** The method of Claim 56, wherein the method is performed by multiple devices in communication with each other.

111. **(Previously Presented)** The method of Claim 56, wherein the network management system is a gateway device.

112. **(Previously Presented)** The network management system of Claim 63, wherein the first request is configured with network settings that do not correspond to the network.

113. **(Previously Presented)** The network management system of Claim 63, wherein the processor is further configured to store the first request to access the network resource.

114. **(Previously Presented)** The network management system of Claim 63, wherein the processor is further configured to communicate a modified request to the redirection server, the modified request being based upon the first request to access the network resource.

115. **(Previously Presented)** The network management system of Claim 63, wherein the redirection data comprises a browser redirect message.

116. **(Previously Presented)** The network management system of Claim 63, wherein the processor is further configured to determine whether the portable communication device is authorized to access the network resource.

117. **(Previously Presented)** The network management system of Claim 63, wherein the network management system is a gateway device.

118. **(Previously Presented)** The method of Claim 77, wherein the determination of whether to provide the portable communication device with access to the network resource is based at least in part on a port.

119. **(Previously Presented)** The method of Claim 77, wherein the determination of whether to provide the portable communication device with access to the network resource is based at least in part on a circuit ID.

120. **(Previously Presented)** The method of Claim 77, wherein the determination of whether to provide the portable communication device with access to the network resource is based at least in part on a VLAN ID.

121. **(Previously Presented)** The method of Claim 77, wherein the determination of whether to provide the portable communication device with access to the network resource is based at least in part on a MAC address.

122. **(Previously Presented)** The method of Claim 77, further comprising communicating request-related data to a redirection server, the request-related data being based on the first request to access the network resource.

123. **(Previously Presented)** The method of Claim 77, wherein the resource identification data is a URL.

124. **(Previously Presented)** The method of Claim 77, wherein the resource identification data is a network address.

125. **(Previously Presented)** The method of Claim 77, wherein the step of determining whether to provide the portable communication device with access to the network resource precedes the step of receiving the redirection data.

126. **(Previously Presented)** The method of Claim 77, wherein determining whether to provide the portable communication device with access to the network resource comprises determining whether the portable communication device is authorized to access the requested network resource.

127. **(Currently Amended)** The method of ~~Claim 130~~ Claim 77, further comprising redirecting, upon determining that the portable communication device is not authorized to access the requested network resource, the portable communication device to an authentication system.

128. **(Previously Presented)** The method of Claim 77, further comprising communicating a modified request to a redirection server, the modified request being based upon the request to access the network resource.

129. **(Previously Presented)** The method of Claim 77, wherein the redirection data comprises a browser redirect message.

130. **(Previously Presented)** The method of Claim 77, wherein the method is performed by single device.

131. **(Previously Presented)** The method of Claim 77, wherein the method is performed by multiple devices in communication with each other.

132. **(Previously Presented)** The method of Claim 77, wherein the network management system is a gateway device.

133. **(Previously Presented)** The network management system of Claim 87, wherein the one or more processors are configured to determine whether to allow the portable communication device to access the requested network resource based at least in part on a port.

134. **(Previously Presented)** The network management system of Claim 87, wherein the one or more processors are configured to determine whether to allow the portable communication device to access the requested network resource based at least in part on a circuit ID.

135. **(Previously Presented)** The network management system of Claim 87, wherein the one or more processors are configured to determine whether to allow the portable communication device to access the requested network resource based at least in part on a VLAN ID.

136. **(Previously Presented)** The network management system of Claim 87, wherein the one or more processors are configured to determine whether to provide the portable communication device with access to the requested network is based at least in part on a MAC address.

137. **(Previously Presented)** The network management system of Claim 87, wherein the one or more processors are further configured to communicate request-related to a redirection server, the request-related data being based on the first request to access the network resource.

138. **(Previously Presented)** The network management system of Claim 87, wherein the resource identification data is a URL.

139. **(Previously Presented)** The network management system of Claim 87, wherein the resource identification data is a network address.

140. **(Previously Presented)** The network management system of Claim 87, wherein the one or more processors are further configured to determine whether to provide the portable communication device with access to the network resource prior to receiving the redirection data.

141. **(Previously Presented)** The network management system of Claim 87, wherein the one or more processors are further configured to determine whether the portable communication device is authorized to access the network resource.

142. **(Previously Presented)** The network management system of Claim 87, wherein the one or more processor are further configured to redirect upon determining that the portable communication device is not authorized to access the requested network resource.

143. **(Previously Presented)** The network management system of Claim 87, wherein the one or more processors are further configured to communicate a modified request to a redirection server, the modified request being based upon the request to access the network resource.

144. **(Previously Presented)** The network management system of Claim 87, wherein the redirection data comprises a browser redirect message.

145. **(Previously Presented)** The network management system of Claim 87, wherein the one or more processors are comprised in the same housing.

146. **(Previously Presented)** The network management system of Claim 87, wherein the one or more processors are comprised in the separate housings.

147. **(Previously Presented)** The network management of Claim 87, wherein the network management system is a gateway device.

148. **(New)** The method of Claim 56, wherein the first request includes header and body data, wherein first request is configured with attributes including a source address, a checksum, and a port number, wherein the checksum is calculated based at least in part on header and body data of one or more network packets, and wherein the

browser redirect message comprises attributes in which at least one of a source address, a checksum, and a port number differs from those attributes of the first request.

149. **(New)** The network management system of Claim 63, wherein the first request is configured with attributes including a source address, a checksum, and a port number, wherein the checksum allows for verifying correct data transmission, and wherein the browser redirect message comprises attributes in which at least one of a source address, a checksum, and a port number differs from those attributes of the first request.

150. **(New)** The method of Claim 77, wherein the first request comprises attributes including a source address, a checksum, and a port number, wherein the checksum allows for verifying correct data transmission, and wherein the browser redirect message comprises attributes in which at least one of a source address, a checksum, and a port number differs from those attributes of the first request.

151. **(New)** The network management system of Claim 87, wherein the first request comprises a source address, a checksum allowing for verification of correct data transmission, a port number, and a resource locator that identifies the network resource, and wherein the browser redirect message includes at least one of a source address, a checksum, and a port number that differs from those attributes of the first request.